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GENERIC PLACEMENT AND SYNONYMY OF SOME NEW WORLD SCUTELLERIDAE (HEMIPTERA: HETEROPTERA) IN THE BRITISH MUSEUM (NATURAL HISTORY)

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Abstract.—The type specimens representing most of the New World species of Scutelleridae proposed by Dallas, Distant, Walker, and Westwood were examined for generic placement. A list of correctly placed species and a list of species currently considered junior synonyms are given. New combinations and synonymy are proposed when appropriate. The following new combinations are proposed: *Acantholomidea porosa* (Germar) from *Camirus; Camirus divergens* (Walker) from *Chelysoma*; *Coptochilus neotropicalis* (Distant) from *Chelyschema*; *Diolcus cassidoides* (Walker) from *Ascanius*; and *Testrina wolfii* (Fabricius) from *Chelyschema.* The following new synonymy is recognized: *Chelysomidea* Lattin junior synonym of *Orsilochides* Kirkaldy; *Chelyschema vittata* (Walker), junior synonym of *Chelyschema trinotata* (Walker); *Chelysoma bajulans* (Distant), junior synonym of *Dystus puberulus* Stål; *Chelysoma diversa* (Distant), junior synonym of *Orsilochides scurrilis* (Stål); *Testrina laticollis* Walker, junior synonym of *Testrina wolfii* (Fabricius); *Homaemus fumeus* Distant and *Homaemus retostus* Distant, junior synonyms of *Homaemus proteus* Stål; *Symphylus amazonicus* Kirkaldy, junior synonym of *Symphylus devexus* Walker. Lectotypes and paralectotypes are designated for *Symphylus vittatus* Walker and *Homaemus fumeus* Distant. Lectotypes are designated for *Augocoris gigas* Westwood and *Camirus pullatus* Distant.

Schouteden (1904) provided keys to the genera of Scutelleridae and listed species included in each genus. Distant (1899) made some changes in the generic placement and synonymy of this family, primarily of species described by Walker (1867–1868). Since that time, New World taxa of this family have received little attention with a few exceptions (Eger, 1987, 1990; Lattin, 1964, 1977, 1988; Paleari, 1992). We have examined type material for numerous species, primarily in the British Museum of Natural History, and realized that the generic placement and synonymy of a number of these species needed clarification. The purpose of this paper is to indicate the correct generic placement of New World Scutelleridae described primarily by British authors (Dallas, Distant, Walker, and Westwood) and make necessary changes. In addition, changes in synonymy are made where appropriate at this time.

The format of this paper follows that of Rolston (1976). Names proposed by the above British authors that have been placed, either originally or subsequently, in the correct genus are listed. Names proposed by these authors that are currently considered junior synonyms are listed along with the senior synonym. Following these lists, new combinations and synonymy are proposed and discussed. Although most of the specimens studied were labeled as type or paratype, holotypes and paratypes

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were not designated by these authors. Thus, lectotypes and paralectotypes are designated where appropriate. Label information, as it appears on the label, is given for type specimens examined only in conjunction with changes in synonymy or generic placement. When multiple labels are present, the position of the label is indicated by letters (a), (b), etc., with (a) indicating the uppermost label.

It is a pleasure to dedicate this work to Larry Rolston in recognition of his many contributions to the systematics of the Pentatomoidea and to the science of entomology. It is also fitting that one of his earlier papers served as a model for this one.

VALID SPECIES CORRECTLY PLACED TO GENUS

Agonosoma bicolor Westwood, 1837
Augocoris nigripennis Dallas, 1851
Augocoris rufus Dallas, 1851
Camirus brevilinea (Walker, 1867)
Chelycoris scitulus (Walker, 1867)
Chelycoris vittatus Distant, 1911
Chelyschema leucotela (Walker, 1867)
Crathis ansata (Distant, 1889)
Galeacius crowleyi Distant, 1911
Galeacius tessellatus Distant, 1889
Lobothyreus lobatus (Westwood, 1837)
Orsilochides variabilis marginella (Dallas, 1851)
Orsilochides stictica (Dallas, 1851)
Pachycoris chrysomelinus Walker, 1867
Pachycoris torridus linnaei Westwood, 1837
Polytes bicolor Distant, 1911
Polytes granulatus (Walker, 1868)
Polytes leopardinus Distant, 1911
Polytes lineolatus (Dallas, 1851)
Polytes obscurus (Dallas, 1851)
Polytes propinquus (Walker, 1867)
Polytes rubromaculatus Distant, 1911
Polytes velutinus (Dallas, 1851)
Sphyrocoris elongatus Distant, 1880[2]
Symphylus albomaculatus Distant, 1889
Symphylus deplanatus bipustulatus Walker, 1868
Symphylus leucospilus (Walker, 1867)
Symphylus modestus Distant, 1880
Symphylus obtusus Dallas, 1851
Symphylus cyphonoides (Walker, 1867)
Symphylus deplanatus apicifer Walker, 1868
Symphylus poecilus Dallas, 1851
Symphylus ramivitta Walker, 1868
Symphylus rivulosus (Walker, 1867)
Symphylus signoreti Distant, 1880

SPECIES CURRENTLY CONSIDERED JUNIOR SYNONYMS[3]

Agonosoma flavipes Dallas, 1851 = *Agonosoma trilineatum* (Fabricius, 1781) [Paleari, 1992].
Lobothyreus obscurus Distant, 1880 = *Crathis longifrons* Stål, 1861 [Bergroth, 1891]
Pachycoris apicalis Walker, 1867 = *Lobothyreus lobatus* (Westwood, 1837) [Distant, 1899]

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[2] Types for this species were not located in the British Museum, but material determined as this species by Distant was studied.

[3] In this list, the junior synonym is listed first, followed by the senior synonym and the literature citation where this synonymy was first proposed.

Pachycoris castaneus Dallas, 1851 = *Coptochilus ferrugineus* Amyot & Serville, 1843 [Stål, 1870]
Pachycoris delineatus Walker, 1867 = *Sphyrocoris obliquus* (Germar, 1839) [Distant, 1899]
Pachycoris flavescens Westwood, 1837 = *Diolcus irroratus* (Fabricius, 1775) [Stål, 1870]
Pachycoris guttipes Walker, 1867 = *Tetyra pinguis* (Germar, 1839) [Schouteden, 1904]
Pachycoris nitens Westwood, 1837 = *Pachycoris fabricii* (Linnaeus, 1771) [Stål, 1870]
Pachycoris piperitia Westwood, 1837 = *Ascanius hirtipes* (Herrich-Schaeffer, 1836) [Germar, 1839]
Pachycoris pumila Westwood, 1837 = *Pachycoris fabricii* (Linnaeus, 1771) [Stål, 1870]
Pachycoris quadristriga Walker, 1867 = *Augocoris rugulosus* (Herrich-Schaeffer, 1838) [Distant, 1899]
Polytes inca Distant, 1899 = *Polytes lineolatus* (Dallas, 1851) [Lattin, 1977].
Symphylus gibbosus Distant, 1880 = *Symphylus obtusus* Dallas, 1851 [Distant, 1899]
Symphylus oculatus Walker, 1868 = *Camirus conicus* (Germar, 1839) [Distant, 1899]
Symphylus plagiatus Walker, 1867 = *Symphylus rivulosus* (Walker, 1867) [Distant, 1899]
Symphylus politus Walker, 1868 = *Nesogenes boscii* (Fabricius, 1798) [Distant, 1899]
Symphylus signatus Walker, 1868 = *Lobothyreus lobatus* (Westwood, 1837) [Distant, 1899]
Symphylus vernus Distant, 1889 = *Symphylus cyphonoides* (Walker, 1867) [Distant, 1899]

NEW COMBINATIONS AND NEW SYNONYMY

Acantholomidea porosa (Germar, 1839), NEW COMBINATION

Pachycoris porosus Germar, 1839, pp. 108–109.
Zophoessa porosa; Dallas, 1851, p. 43, pl. 1, fig. 7.
Zophoessa consocia Uhler, 1876, p. 274.
Camirus porosus; Uhler, 1886, p. 2.
Camirus consocius; Uhler, 1886, p. 2.
Camirus pullatus Distant, 1889, p. 316, pl. 30, fig. 9.
Acantholomidea porosa; Lattin, 1964, pp. 69–76, pl. 2, figs. 10–13; McDonald, 1966, p. 16, 49, figs. 73–78, 433–435; McPherson, 1980, p. 1.

Lattin (1964) correctly placed *Pachycoris porosus* in the genus *Acantholomidea.* McDonald (1966) and McPherson (1980) followed Lattin in this placement but other authors, including Froeschner (1988), did not recognize this placement because Lattin's work was not published. *Acantholomidea porosa* closely resembles *A. denticulata* (Stål, 1870), differing primarily in the lack of dentate anterolateral pronotal margins. *Acantholomidea* and *Camirus* have historically been separated by the presence or absence of these dentate margins, but this character is clearly of value only

for separating the two species of *Acantholomidea*. *Acantholomidea* differs from *Camirus* in having the head more declivent and the bucculae somewhat triangular in shape and more produced ventrally. The bucculae in *Camirus* are more evenly rounded and less produced. In addition, species of *Acantholomidea* are smaller than most species of *Camirus* and are generally black with a few lighter markings. Species of *Camirus* are usually a mottled brown color.

Camirus pullatus was synonymized with *C. porosus* by Schouteden (1904), a decision with which we concur. Distant listed two specimens, one from San Geronimo, Guatemala and one from Bogota, Colombia. Only the Guatemalan specimen, a male, was located. This specimen is designated LECTOTYPE and is labeled: (a) Type. (b) S. Geronimo, 3,000 ft, Champion. (c) *Camirus pullatus* Dist. (d) Brit. Mus. 1893-141. (e) B. C. A., Hem. 1, *Camirus pullatus*. (f) BRIT. MUS. TYPE No. HEM. 522.

***Augocoris gomesii* Burmeister, 1835.**

Augocoris gomesii Burmeister, 1835, Handb. Ent. 2:396.
Augocoris gigas Westwood, 1837, p. 16.

The type series of *Augocoris gigas* consists of two females. Specimen no. 1, designated LECTOTYPE, is labeled: (a) *gigas* Hope. (b) *Augocoris gomesi* Burm. (c) *Scutellera* n. sp. Mexico. (d) TYPE. (e) TYPE HEM.: No. 47 1/2, *AUGOCORIS GIGAS* WESTWOOD, HOPE DEPT. OXFORD. Specimen no. 2 is labeled: (a) 5. (b) Mex. (c) TYPE. WESTW. (HOPE) C. Hemipt. 1837; Part I, page 16, Distant, P. Z. S., 1900, p. 807–825. (d) TYPE HEM.: No. 47 2/2, *Augocoris gigas* Westwood, HOPE DEPT. OXFORD. This species was considered a junior synonym of *A. gomesii* by Germar (1839). Specimen no. 1 is indeed a specimen of *A. gomesii*. The second specimen, however, is *A. ehrenbergii* Germar, 1839. Thus, the type series of *A. gigas* contains one specimen each of *A. gomesii* and *A. ehrenbergii*. The color pattern of the two type specimens is remarkably similar. The lectotype designated here fixes *A. gigas* as a junior synonym of *A. gomesii*.

***Camirus divergens* (Walker, 1868), NEW COMBINATION**

Symphylus divergens Walker, 1868, p. 516.
Orsilochus divergens; Distant, 1899, p. 43.
Chelysoma divergens; Kirkaldy, 1909, p. 283.

The transverse median pronotal impression and declivent head place this species in *Camirus*. The type of *Symphylus divergens* is a female, labeled: (a) Type. (b) 62, 57. (c) *Symphylus divergens*. (d) BRIT. MUS. TYPE No. HEM. 539. No locality is given on the specimen although Walker (1868) gives the locality as "Amazon Region. From Mr. Bates' collection."

***Chelyschema trinotata* (Walker, 1867)**

Pachycoris trinotatus Walker, 1867, p. 51.
Symphylus vittatus Walker, 1867, p. 55. NEW SYNONYMY
Achates ramosus Distant, 1889, p. 311, pl. 30, fig. 4.

Achates trinotatus; Distant, 1899, pp. 42, 50.
Achates vittatus; Distant, 1899, pp. 42, 50.
Chelyschema trinotatus; Schouteden, 1904, p. 47.
Chelyschema vittatus; Schouteden, 1904, p. 47.
Chelyschema trinotata; Kirkaldy, 1909, p. 283.
Chelyschema vittata; Kirkaldy, 1909, p. 283.

The synonymy of *A. ramosus* with *C. trinotata* was established by Distant (1899). The type of *A. ramosus* is merely the male of *C. trinotata* which was described from a single female. The type series of *Symphylus vittatus* consists of two females. The specimen labeled as follows is designated LECTOTYPE: (a) Type. (b) Para. (c) 10. *SYMPHYLUS VITTATUS.* (d) BRIT. MUS. TYPE No. HEM. 549. The PARALECTOTYPE is labeled: (a) Paratype. (b) Amaz. (c) Saunders. 65-13. (d) *Symphylus vittatus*; Walker's catal. These two specimens are nearly identical to, and certainly conspecific with, the type of *Pachycoris trinotatus.* The single female type of *P. trinotatus* is labeled: (a) Type. (b) Bras. Tapayos. (c) a. Tapayos. (d) 35. *PACHYCORIS TRINOTATUS.* (e) BRIT. MUS. TYPE No. HEM. 547. The single male type of *Achates ramosus* is labeled: (a) Type. (b) San. Juan, Vera Paz, Champion. (c) B. C. A. Hem. I. *Achates ramosus.* (d) *Achates ramosus* Dist. (e) BRIT. MUS. TYPE No. HEM. 548. It differs significantly from the types of *Pachycoris trinotatus* and *Symphylus vittatus* only in sex.

***Orsilochides* Kirkaldy, 1909, NEW STATUS**

Orsilochus Stål, 1867, p. 493 (type = *Pachycoris variabilis* Herrich-Schaeffer, 1837; preoccupied by *Orsilochus* Burmeister, 1847, Handb. Ent. 5, p. 112, in the Coleoptera).
Chelysoma Bergroth, 1891, p. 235 (new name for *Orsilochus* Stål; preoccupied by *Chelysoma* Gravenhorst, 1843, Vergl. Zool. p. 63, in the Tunicata).
Chelysoma subgen. *Orsilochides* Kirkaldy, 1909, p. 283 (type = *Orsilochus diversus* Distant, 1889).
Chelysomidea Lattin 1988, p. 689 (unnecessary new name for *Chelysoma* Bergroth, 1891). NEW SYNONYMY

Kirkaldy (1909) proposed *Orsilochides* as a subgenus of *Chelysoma,* naming *Orsilochus diversus* as the type. The name *Chelysoma* was preoccupied, so *Orsilochides,* as the next oldest genus-group name becomes the valid name for the genus. As discussed below, characters on which Distant based *Orsilochus diversus* are artifacts of a callow specimen. Kirkaldy also used these characters as the basis of the subgenus *Orsilochides.* Thus, division of this genus into subgenera was not warranted. Lattin (1988) overlooked Kirkaldy's name and proposed the name *Chelysomidea* as a replacement name for *Chelysoma. Chelysomidea* is, therefore, a junior synonym of *Orsilochides.*

***Orsilochides scurrilis* (Stål, 1855)**

Pachycoris scurrilis Stål, 1855, p. 81.
Orsilochus scurrilis, Stål, 1870, p. 10.
Orsilochus diversus Distant, 1889, p. 312, pl. 30, fig. 12. NEW SYNONYMY

Chelysoma scurrilis; Kirkaldy, 1909, p. 284.
Chelysoma diversa; Kirkaldy, 1909, p. 284.

The single type specimen of *Orsilochus diversus* is a callow male labeled: (a) Type. (b) S. Geronimo, Guatemala. Champion. (c) B.C.A., Hem. 1. *Orsilochus diversus.* (d) *Orsilochus*? *diversus* Dist. (e) BRIT. MUS. TYPE No. HEM. 540. Distant (1889) stated that "The structure of the antennae [fourth and fifth segments deeply sulcate], in connection with the very distinct basal impression to the scutellum, renders this species very distinct from the other members of the genus. . . ." Both of these characters are artifacts resulting from the callow nature of the specimen. The type is badly damaged, but the dorsal coloration of *Orsilochides scurrilis* (chocolate brown with yellow 'zig-zag' fascia) is quite distinct and can be seen in this specimen. Overall size and shape, and characters not distorted in the type leave little doubt that *Orsilochus diversus* is a junior synonym of *Orsilochides scurrilis.*

***Coptochilus neotropicalis* (Distant, 1899), NEW COMBINATION**

Achates neotropicalis Distant, 1899, pp. 42–43.
Chelyschema neotropicalis; Schouteden, 1904, p. 47.

The head of this species is concave, the lateral margins of the juga curving dorsad, placing it with certainty in *Coptochilus.* The type is a male, labeled: (a) Type. (b) Madeira R., Amazon. (c) Distant Coll., 1911-383. (d) *neotropicalis* Distant. (e) BRIT. MUS. TYPE. No. HEM. 557.

***Diolcus cassidoides* (Walker, 1867), NEW COMBINATION**

Pachycoris cassidoides Walker, 1867, p. 48.
Tetyra? *cassidoides*; Uhler, 1886, p. 1.
Ascanius cassidoides; Distant, 1899, pp. 42, 50.

The shape of the body and head is similar to that of *Ascanius* spp., but the male and female genitalia clearly place *Pachycoris cassidoides* in *Diolcus.* In *D. cassidoides,* as in other species of *Diolcus,* the dorsal punctation is relatively even and fine and the ostiolar rugae are short, consisting of an enlarged concavity extending laterad a short distance from the ostiole. In species of *Ascanius,* the dorsal punctation is clustered and coarse and the ostiolar rugae are auriculate apically. In addition, the distribution of *D. cassidoides* (Hispaniola) is consistent with that of other species of *Diolcus* (primarily the Caribbean Islands and countries bordering the Caribbean). Species of *Ascanius* are found in central and southern South America. The type of *Pachycoris cassidoides* is a female labeled: (a) Type. (b) 16. *Pachycoris cassidoides.* (c) 66 12. (d) Haiti. (e) BRIT. MUS. TYPE No. HEM. 535.

***Dystus puberulus* Stål, 1862**

Dystus puberulus Stål, 1862, p. 83.
Orsilochus bajulans Distant, 1900, p. 687. *NEW SYNONYMY*
Dystus villosus Breddin, 1904, p. 153.
Chelysoma bajulans; Bergroth, 1908, p. 142.

The densely pubescent, strongly convex body and distinctly flattened antennal

segments place *O. bajulans* in *Dystus.* The type is a male, labeled: (a) Type. (b) San José, 1161 m, 42, P. Biol. (c) Distant Coll., 1911-383. (d) *Orsilochus bajulans* (type) Dist. (e) *bajalans* [sic!] Dist. (f) BRIT. MUS. TYPE No. HEM. 538. An additional label which read: "9. *PACHYCORIS STICTICUS*" undoubtedly was misplaced and belongs on the type of *P. sticticus* Dallas, 1851, which lacked the characteristic name label. The label was placed on the type of *P. sticticus* by JDL.

The type of *O. bajulans* is nearly identical to that of *D. puberulus* examined by JDL in the Naturhistorische Museum Vienna. The type of the latter species, a female, bears the following data: (a) Mexico, Coll. Signoret (b) *puberulus,* det. Stål.

***Homaemus proteus* Stål, 1862**

Homaemus proteus Stål, 1862, p. 82.
Homaemus fumeus Distant, 1889, p. 314, pl. 30, fig. 6. NEW SYNONYMY
Homaemus retostus Distant, 1889, p. 314, pl. 30, fig. 7. NEW SYNONYMY

This is a variable species. Distant's names apply to color variants of *H. proteus.* The type series of *H. fumeus* consists of two females. The LECTOTYPE, designated here, is labeled as follows: (a) Type. (b) Type. (c) Orizaba, H.H.S. & F.D.G., Dec. 1887. (d) B.C.A., Hem. 1, *Homaemus fumeus.* (e) *Homaemus fumeus* Distant. (f) BRIT. MUS. TYPE No. HEM. 505. The PARALECTOTYPE is labeled: (a) Paratype. (b) Omilteme, Guerrero, 8,000 ft, July, H. H. Smith. (c) Distant Coll., 1911-383. (d) *fumeus* Distant. The type of *H. retostus* is a female, labeled: (a) Type. (b) *Homaemus retostus* Dist. (c) Atoyac, Vera Cruz. Schumann. (d) Brit. Mus. 1893-141. (e) B.C.A., Hem. 1, *Homaemus retostus* Dist. (f) BRIT. MUS. TYPE No. HEM 575.

***Symphylus devexus* Walker, 1868**

Symphylus divergens Walker, 1868, p. 517.
Symphylus devexus Walker, 1868, p. 578 (new name for *Symphylus divergens* Walker, 1868).
Symphylus amazonicus Kirkaldy, 1909, p. 370 (unnecessary new name for *Symphylus divergens* Walker, 1868) *NEW SYNONYMY*

Walker (1868) used the name *Symphylus divergens* for two different species described on subsequent pages (516 & 517) of his catalog. However, in the same work (p. 578), he corrected his error by proposing the replacement name *S. devexus* for the species described as *S. divergens* on p. 517. Walker's correction was overlooked by subsequent authors and Kirkaldy (1909) proposed *S. amazonicus* as a replacement name for *S. divergens. Symphylus amazonicus* is thus a junior synonym of *S. devexus.* The type is a male, labeled: (a) Type. (b) Braz; 62, 54. (c) Symphylus divergens. (d) BRIT. MUS. TYPE No. HEM. 518.

***Testrina wolfii* (Fabricius, 1803), NEW COMBINATION**

Tetyra wolfii Fabricius, 1803, p. 134.
Pachycoris wolfii; Germar, 1839, p. 91.
Testrina laticollis Walker, 1867, p. 61. *NEW SYNONYMY*
Achates wolfii; Stål, 1868, p. 13.
Chelyschema wolfii; Schouteden, 1904, p. 47.

This is a distinctive species with strongly convex and slightly explanate anterolateral pronotal margins. It resembles species of *Chelyschema* and *Tetyra* in the size and shape of the body, scutellum and ostiolar rugae, and, to a lesser degree, in the shape and size of the female genital plates. It differs from species of these genera in the more broadly rounded head, lack of distinctly concave lateral jugal margins, more convex dorsum, less convex venter, and more convex anterolateral pronotal margins. These differences may not be sufficient to warrant a separate genus for *T. wolfii,* but in the absence of male specimens for study, placement in either *Tetyra* or *Chelyschema* would be tentative.

The type of *Testrina laticollis* is a female, labeled: (a) Type. (b) Braz. (c) *Testrina laticollis.* (d) BRIT. MUS. TYPE No. HEM. 545. The type of *Tetyra wolfii* is a female in the Universitets Zoologiske Museum, Kobenhavn, and is labeled: (a) Type. (b) Amer. Mer. Schmidt, Mus. S.p. J.L., *wolfii,* Fabr.

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